

**R. Bpu10I $\alpha$** 

MGVEQEWIKNITDMYQSPELIPSHASNLLHQLKREKRNEKLKKALEIITP	50
NYISYISILLNNHNMTRKEIVILVDALNEYMNTLRHPSVKSVFSHQADFY	100
SSVLPEFFNLLFRNLIKGLNEKIKVNSQKDIIIDCIFDPYNEGRVVFKKK	150
RVDVAIILKNKFVFNVEIS <u>D</u> FAIPLVAI <u>EIK</u> TNLDKNMLSGIEQSVDL	200
KETFPLCLYYCITELADFAIEKQNYASTHIDEVFILRKQKRGPVRRGTPL	250
EVVHADLILEVVEQVGEHLSKFKDPIKTLKARMTEGYLIKGGK	294

**R. Bpu10I $\beta$** 

MTQIDLSNTKHGSILFEKQKNVKEKYLQQAYKHYLYFRRSIDGLEITNDE	50
AIFKLTQAANNYRDNVLYLFESRPNSGQEAFRYTILEEFFYHLFKDLVKK	100
KFNQEPSSIVMGKANSYVSLSFSPESFLGLYENPIPYIHTKDQDFVLGCA	150
VDLKISPKNELNKENET <u>E</u> IVVPVIAI <u>ECK</u> TYIERNMLDSCAATASRLKAA	200
MPYCLYIVASEYMKMDQAYPELTDIDEVFILCKASVGERTALKKKGLPPH	250
KLDENLMVELFHMVERHLNRVWWSNEALSRRVIGRP	288

**FIGURE 1**

Subunit	Mutation*	Cleavage dsDNA	of Nicking activity
<i>Bpu</i> 10I $\alpha$	D171A	+++	-
<i>Bpu</i> 10I $\alpha$	E180A	++	+
<i>Bpu</i> 10I $\alpha$	E180Q	+	++
<i>Bpu</i> 10I $\beta$	E168A	+++	-
<i>Bpu</i> 10I $\beta$	E177A	-	+++
<i>Bpu</i> 10I $\beta$	E177Q	+	+++
<i>Bpu</i> 10I $\beta$	K179	-	-

FIGURE 2

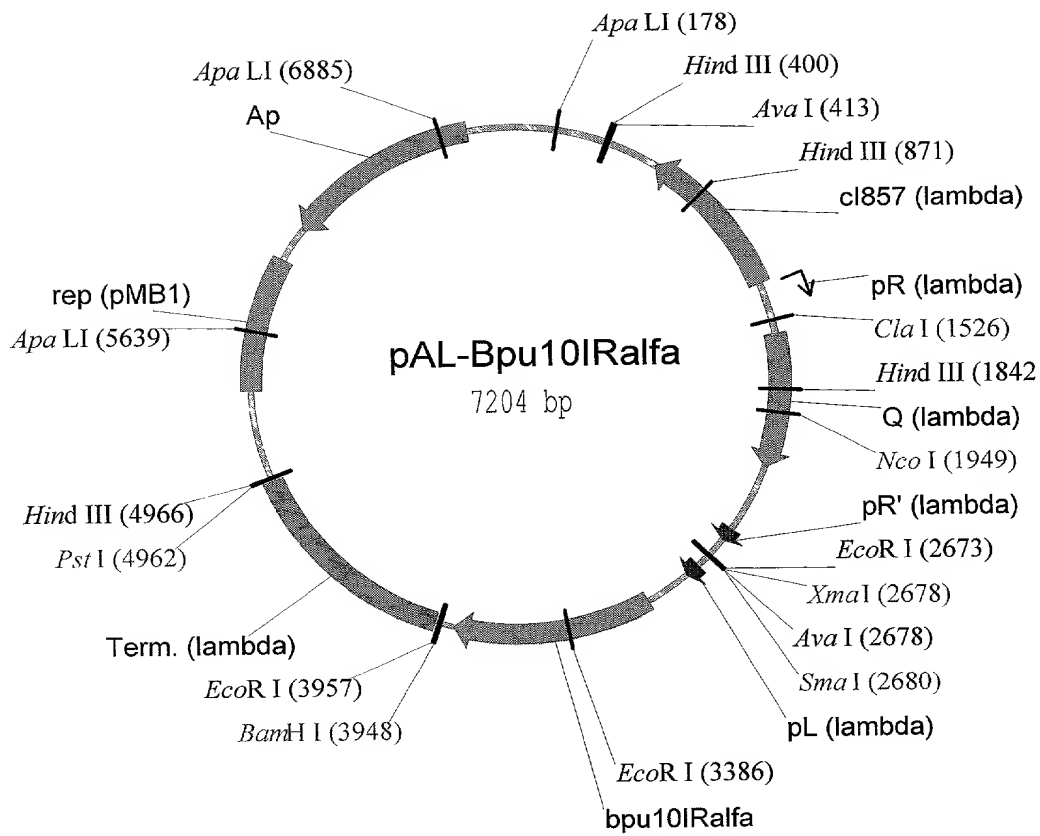


FIGURE 3

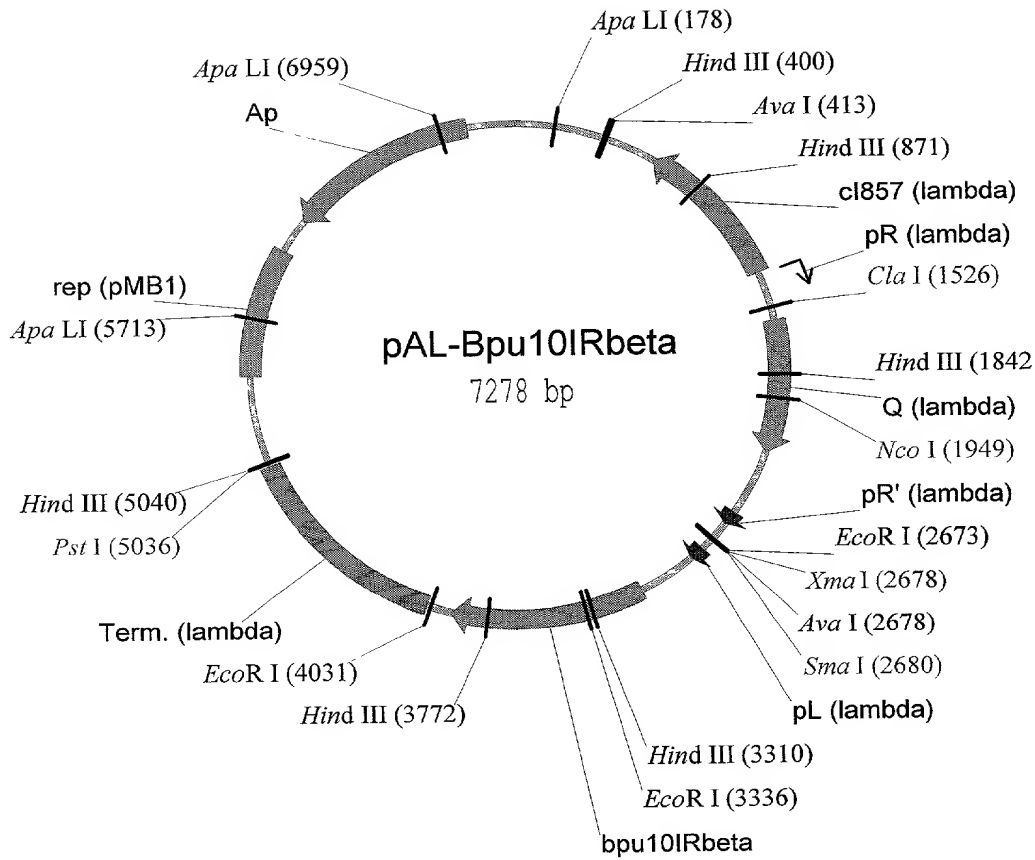


FIGURE 4

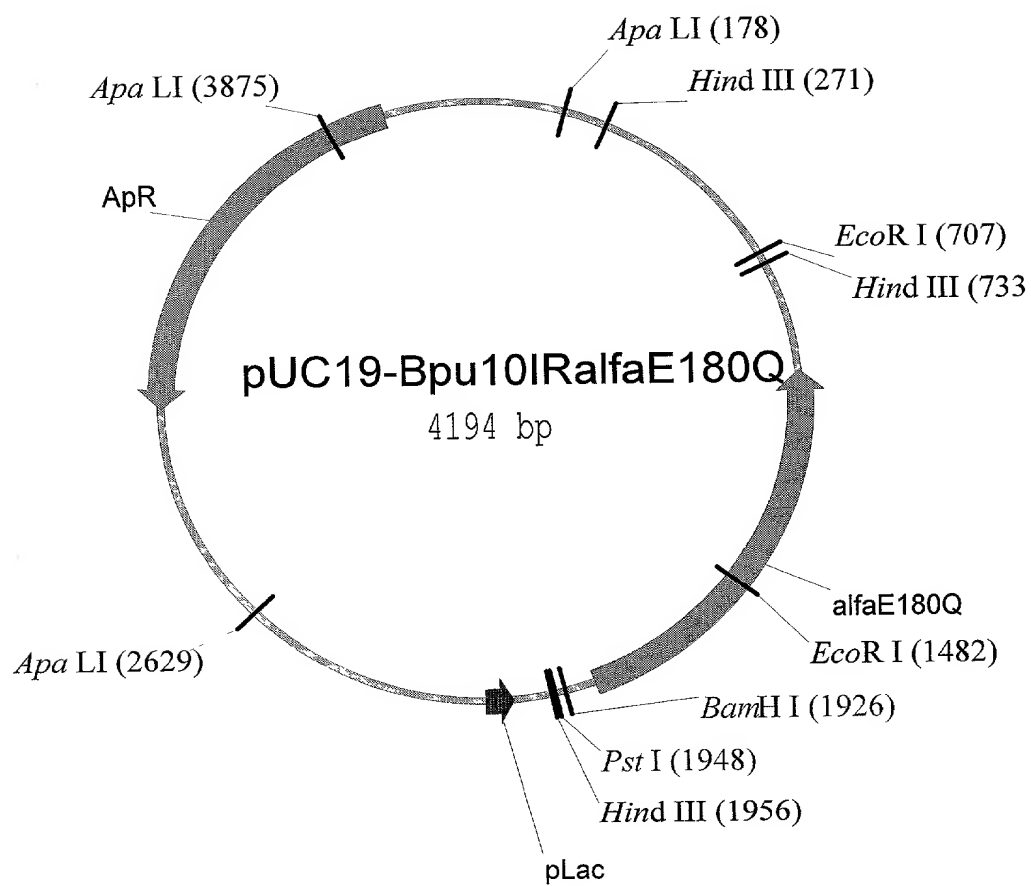


FIGURE 5

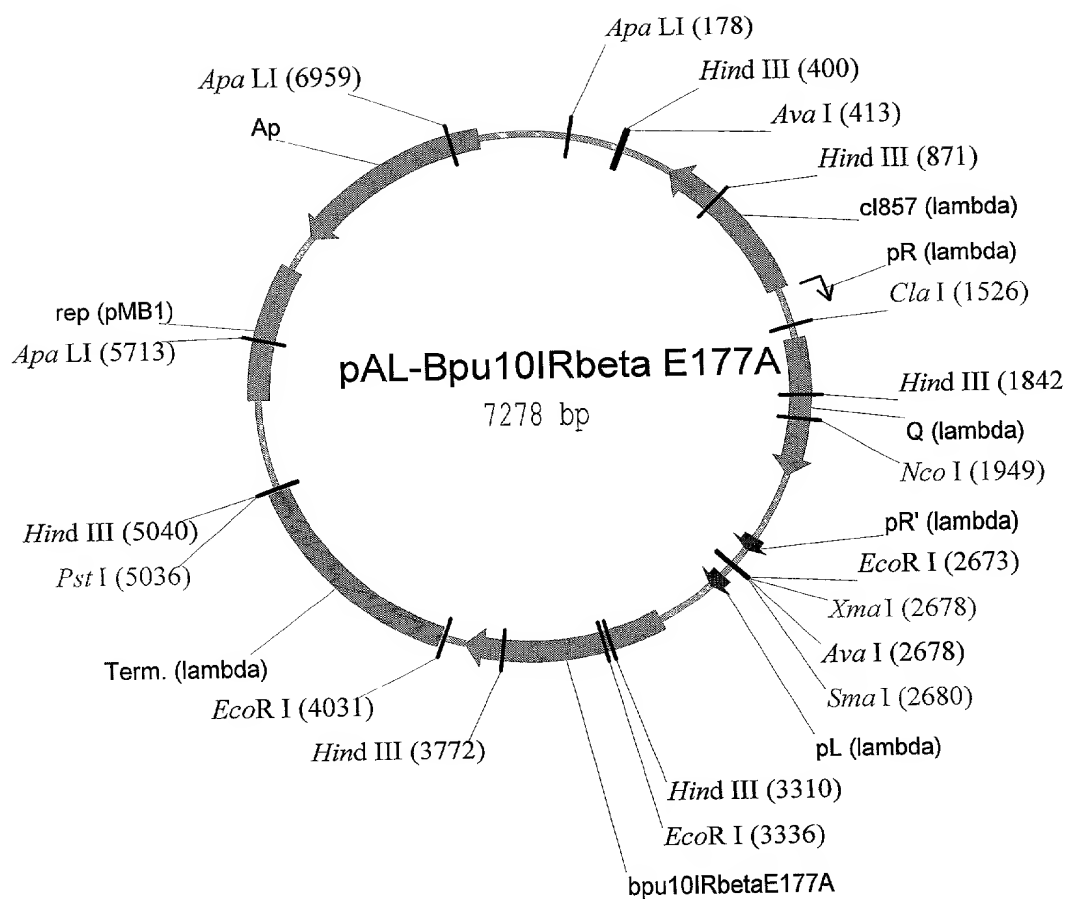


FIGURE 6

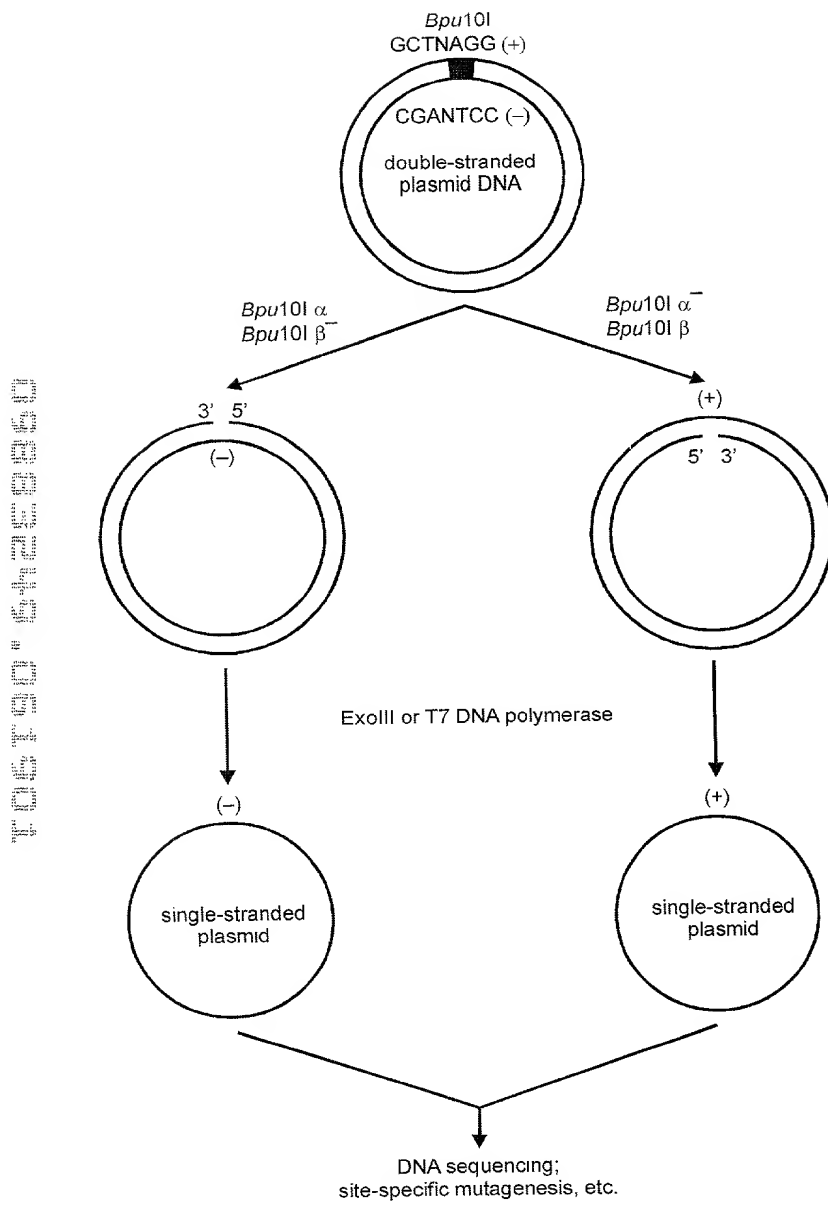


FIGURE 7

Specific or mono  
nucleotide sequences

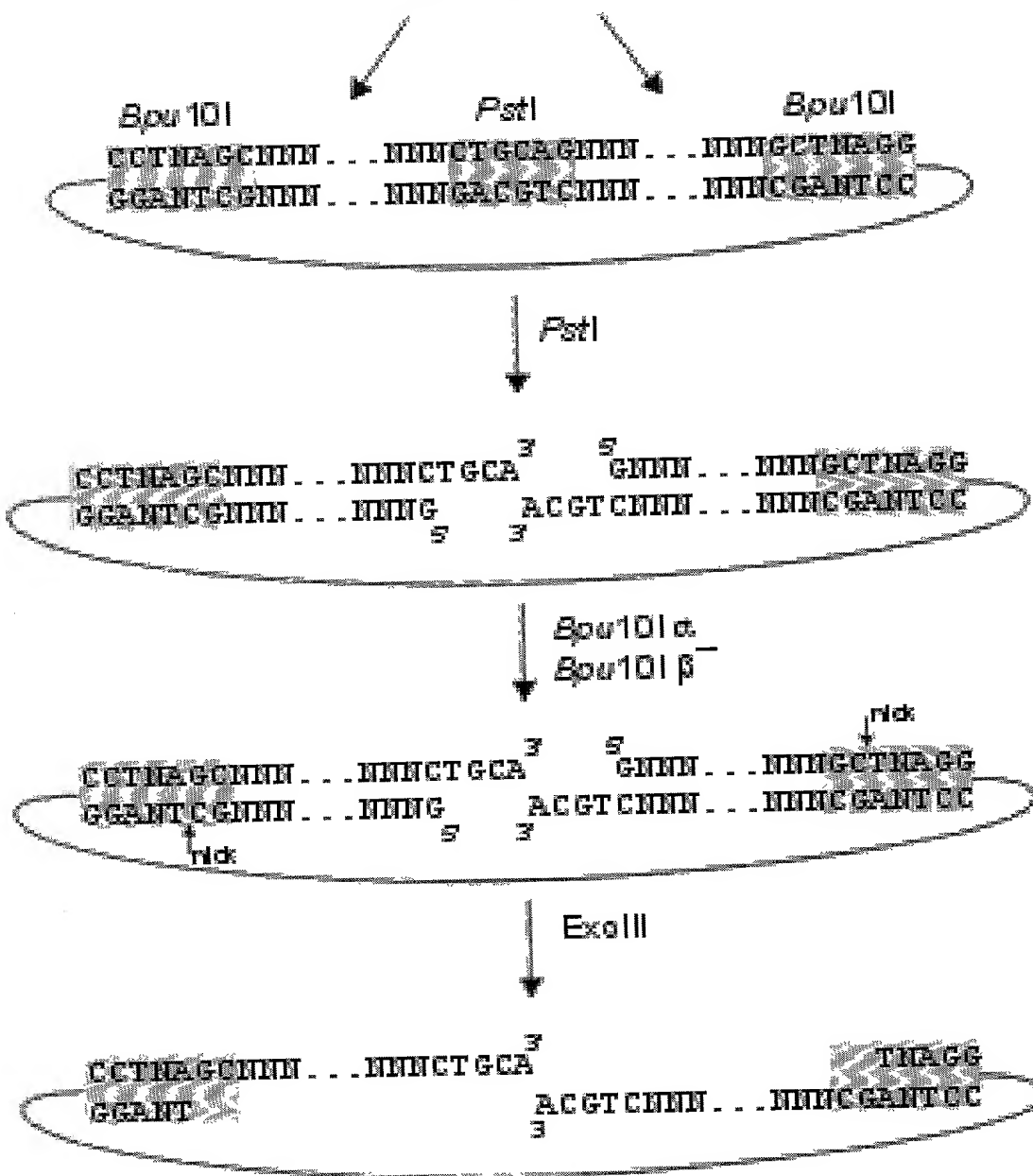


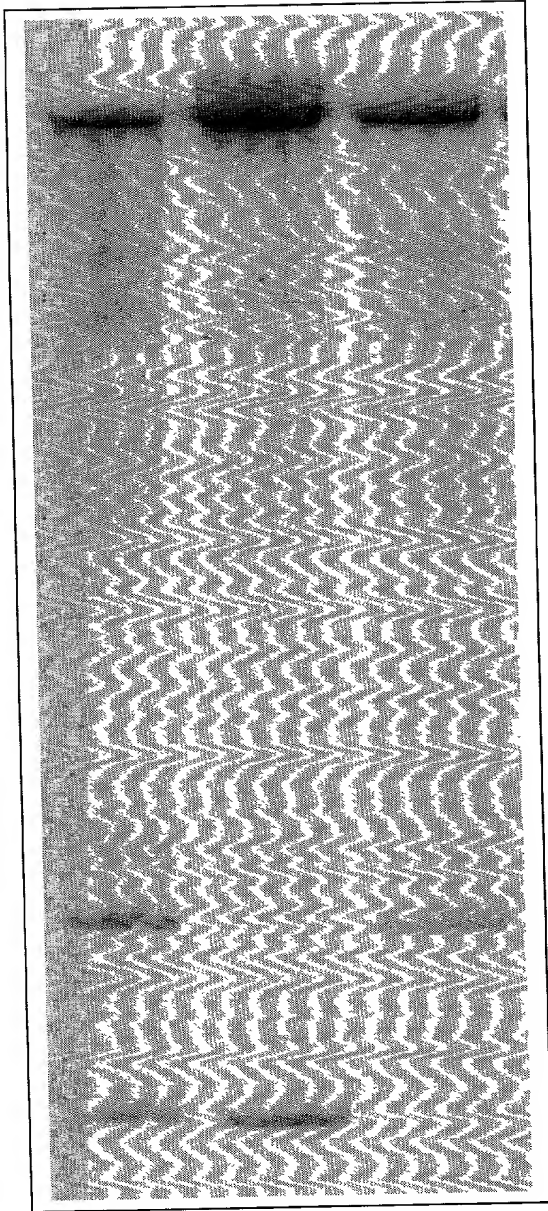
FIGURE 8



↓ 5 min. 95<sup>0</sup>C, ligation

**FIGURE 9**

1 2 3



← 5'-CCTAAGC-3'

←5'-GCTTAGG-3'

FIGURE 10

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1 2 3 4 5 6 7 8 9 10

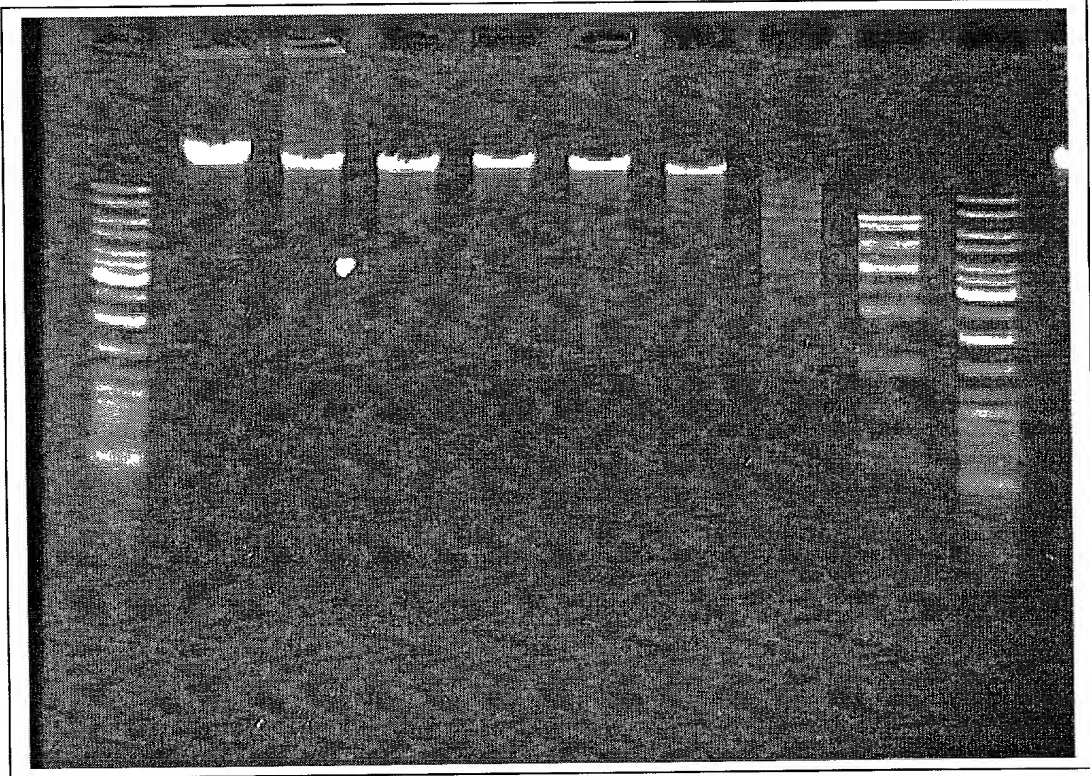


FIGURE 11